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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/079,446	02/19/2002	Fabrice Thebault	787451-2002	9166

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EXAMINER

DONG, DALEI

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 11/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/079,446	THEBAULT ET AL.	
	Examiner	Art Unit	
	Dalei Dong	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 10/079,446.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The abstract of the disclosure is objected to because the abstract contains the word “comprising” and it should be changed to “including”. Correction is required. See MPEP § 608.01(b).
3. The disclosure is objected to because of the following informalities:
On page 11, line 9, cord 24 should be changed to cord 244.
Appropriate correction is required.

Claim Objections

4. Claims 14-55 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Accordingly, the claims 18-55 have not been further treated on the merits.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-55 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "said zone" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recites the limitation "previously" in line 2 of claim 4. There is insufficient antecedent basis for this limitation in the claim.

The dependent claims are rejection upon dependency.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-5 and 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,481,638 to Roll.

Regarding to claims 1-3, 5, 7-13, Roll discloses in Figures 1 and 2, "an optical fiber ribbon 11 comprises an array of optical fibers 10 joined together and encapsulated

by a plastic encapsulant. To provide the ribbon with optical fiber connectors, as described in the aforementioned Shahid patent, a first portion 12 of the optical fiber ribbon has been exposed to a chemical such as methylene chloride to soften the plastic encapsulant, i.e., to convert it from a solid state to a partially fluid state. The purpose of the apparatus of FIGS. 1 and 2 is to strip the softened encapsulant from the optical fibers so that connectors can be applied to portions of the optical fibers that have been exposed by such stripping.

Roll also discloses in Figures 1 and 2, "located on opposite sides of the softened ribbon portion 12 are first and second knife edges 14 and 15, and third and fourth knife edges 16 and 17. As shown more clearly in FIG. 2, first knife edge 14 is held within a first member 20, second knife edge 15 is held within a second member 21, third knife edge 16 is held within a third member 22 and fourth knife edge 17 is held within a fourth member 23. Respectively extending from members 20, 21, 22 and 23 are alignment pins 25, 26, 27 and 28. The members 20-23 also respectively contain alignment apertures 30, 31, 32 and 33 adapted to engage opposite alignment pins 25-28. The first and third members 20 and 22 are contained within an enclosure 35, while members 21 and 23 are contained within an enclosure 36. The enclosures 35 and 36 are arranged such that the softened portion 12 of the ribbon lies between the enclosures and between knife edges 14 and 16.

Roll further discloses in Figure 3, "the next step in a stripping operation is to clamp together enclosures 35 and 36 such that the various alignment pins 25-28 fit into matching alignment apertures 30-33 (shown in FIGS. 1 and 2). The abutting surfaces of

enclosures 35 and 36 include rubber gaskets 37 and 39 which are sufficiently pliable to form between them a water-tight seal. Thus, when they are clamped together, enclosures 35 and 36 form a cavity 38. The first and third members 20 and 22 are contained within the cavity and are slideably mounted on a rod 39. Similarly, members 21 and 23 are slideably mounted on a rod 40. The optical fiber 11 extends between gaskets 37 and 39, which are sufficiently pliable to provide the water-tight seal even with the ribbon between them. Forcing the enclosures 35 and 36 together spaces knife edges 14 and 15, and knife edges 16 and 17, on opposite sides of the first portion 12 at a predetermined distance from the optical fibers. As will be explained more fully later, the knife edges penetrate the softened portion 12, but preferably do not actually contact the glass optical fibers contained within the softened portion 12. The optical fiber 11 is preferably under tension so that it lies substantially along a straight line.

Roll further yet discloses in figure 4, "the next step in the operation is to drive together, as shown, the opposing knife edges 15 and 17, and 14 and 16. This is done by driving together members 20 and 22 on rod 39, and members 21 and 23 on rod 40. Since the knife edges have penetrated the softened part of the encapsulation, the knife edges scoop the softened encapsulation and cause it to gather on their surfaces.

Roll furthermore discloses in Figure 5, "the members 20, 22, 21 and 23 are returned to their original positions. Included respectively in enclosures 35 and 36 are ducts 42 and 43 communicating with cavity 38. Duct 42 is connected to a source 45 of a fluid cleaner, and duct 43 is connected to a cleaner output 46. After the knife edges have scraped the softened encapsulant from the fibers, a cleaner fluid such as ethanol is forced

under pressure through ducts 42 and 43. In this manner, the encapsulant gathered on the knife edges is flushed away, as is any remnant encapsulant that may be on the optical fiber of ribbon portion 12. It is intended that cavity 38 should be water-tight so that there is no leaking as the cleaner fluid is directed through it. The cleaner output at 46 is taken as a waste product of the process” (column 3, lines 10-23).

Roll finally discloses in Figures 3-5, “when the knife edges 14 and 16 penetrate the encapsulant, they remain a distance x away from the optical fiber 10 of twenty-five to thirty microns. This allows sufficient penetration so that the softened encapsulant 12 can be scooped away by the knife edges without the knife edges touching or damaging the optical fiber 10. Acrylate that has been softened by methylene chloride has a gel-like consistency that allows it to be pulled away from the optical fiber 10 as the knife edges move relative to the optical fiber. The upper and lower surfaces of both knife edges 16 and 17 are at an angle with respect to fiber 10 of less than ninety degrees. This allows the encapsulant to be gathered on the upper surface of knife edge 16 and the lower surface of knife edge 14 as the knife edges move with respect to the optical fiber 10” (column 3, lines 41-55).

However, Roll does not disclose using a blade extending at an angle of less than 30 degrees relative to the axis of the fiber. Roll discloses the knife edges of blades extending less than 90 degrees relative to the fiber, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have arranged the blades or knife edges less than 30 degrees relative to the fiber in order to allow

encapsulant be gathered on the surface so the blades as the blades move with respect to the optical fiber.

Regarding to claim 4, it is old and well known in the art to position optical fiber in a precision V-shape. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to secure the optical fiber in a V-shape precision in order to prevent optical fiber from moving and sliding during the removing of the coverings.

9. Claims 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,481,638 to Roll in view of U.S. Patent No. 5,361,384 to Stepan.

Regarding to claim 6, Roll discloses the claimed invention except for the relative rotation between the blade and the fiber. Stepan teaches "the stripping station 1 has centering jaws 1040 which are arranged concentrically and nonrotatably with respect to the axis 1028 of a cable (31) to be stripped and are radially adjustable by an adjusting drive (1056) via a two-armed lever (105) and a cone (109). Furthermore, the stripping knives (1033b) which can be rotated about the axis (1028) by means of a rotary drive (1055) are provided concentrically thereto. The radially acting swivel mechanism for the stripping knives (1033) and for the centering jaws is described in, for example, U.S. Pat. Nos. 4,745,828 and 5,010,797" (column 6, lines 9-19).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the rotating blade of Stepan for the stripping device of Roll in order to allow accurate, rapid and reliable cutting of the optical fiber.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following prior art are cited to further show the state of the art of a method of stripping an optical fiber.

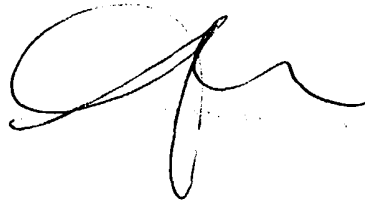
U.S. Patent No. 5,896,787 to DeVincentis.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalei Dong whose telephone number is (703)308-2870. The examiner can normally be reached on 8 A.M. to 5 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703)305-4939. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

D.D.
October 30, 2003

A handwritten signature in black ink, appearing to be 'Dalei Dong', written in a cursive style.